DOCUMENT RESUME

ED 225 692 PS 013 359

AUTHOR Holmes, Clarissa S.; And Others
TITLE Parents' and Teachers' Differing Views of Short Children's Behavior.
PUB DATE Aug 82
NOTE 17p.; Paper presented at the Annual Meeting of the American Psychological Association (90th, Washington, DC, August 23-27, 1982).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adolescents; Age Differences; *Behavior Patterns; Behavior Problems; *Body Height; *Children; Comparative Analysis; Maturity (Individuals); *Parent Attitudes; Physical Characteristics; Sex Differences; *Teacher Attitudes

ABSTRACT

Children over two standard deviations below height expectations have been described by researchers as being behaviorally immature and shown to be emotionally inhibited. The present study seeks to extend these findings by systematically evaluating what role age, sex, and etiology factors may have in the behavioral adjustment of groups of children with constitutional delay (CD), growth hormone deficiency (GHD) or Turner's Syndrome (TS). Fifty-six children and adolescents ages 6 through 16 years whose height was a minimum of two standard deviations below expectations for age (secondary to either GHD, CD, or TS) were studied. Both parent and teacher ratings were employed to provide cross-situational measures of behavior. Of the groups studied, adolescent females were rated by teachers and parents as showing the greatest behavioral immaturity and emotional inhibition. Although teachers' ratings discriminated children's behavior by age and sex factors, parent ratings appeared to be more influenced by children's diagnoses. Significant school problems were noted on parent ratings for all groups of children except the younger CD group. (Author/MP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

In Press: Child Care, Health and Development

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Parents' and Teachers' Differing Views of Short Children's Behavior

Clarissa S. Holmes, Ph.D.

John T. Hayford, M.D.

Robert G. Thompson, M.D.

The University of Iowa

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Clarissa S Holmes
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED225692

PS013359

Running Head: Short Stature

Abstract

Short children, over two standard deviations below height expectation, have been described as being behaviorally immature and shown to be emotionally inhibited. The present study sought to extend these findings by systematically evaluating what role age and sex factors may have in the behavioral adjustment of groups of children with constitutional delay (CD), growth hormone deficiency (GHD) or Turner's Syndrome (TS). Adolescent females were rated by teachers and parents as showing greatest behavioral immaturity and emotional inhibition of the groups studied. Although teachers' ratings discriminated among children's behavior by age and sex factors, parent ratings appeared more influenced by children's diagnoses. Significant school problems were noted on parent ratings for all groups of children, except the young CD group. Peer teasing was frequently reported and a relatively large proportion (25%) of the studied short children were retained in kindergarten through second grade, apparently because of small size and immaturity.

Parents' and Teachers' Differing Views of Short Children's Behavior

Many researchers suggest that behavioral immaturity and emotional inhibition are characteristic of short children who are greater than two standard deviations below height expectation. Small children, who are often treated according to their younger appearing physical size rather than their chronological age, may receive fewer or different opportunities to develop increasing maturity and assertiveness with age. Early studies[1,2] primarily relying upon data obtained from parents and children in semi-structured interviews, reported behavior patterns specific to different etiologies of short stature (i.e., constitutional delay, growth hormone deficiency, achondroplasia). More recent research, using empirically derived assessment instruments, generally has not supported the hypothesis of etiology related behavior patterns, although as a group, short children do appear to be more inhibited than controls on self-report measures[3,4]. However, the variables of sex and age, which may influence behavior adjustment of short children, have not been systemically studied. Both of these factors could be expected to have a significant impact upon societal, and ultimately personal, acceptance of short stature. Social expectations of stature may be more rigid for males and older children in particular. Specifically, traditional sex-role stereotypes for males prescribe "aggressive, dominant, competitive" behaviors[5], and average or above average height may be more conducive to executing this behavioral style. Older short children may exhibit more difficulty in emotional

adjustment than their younger counterparts since adolescence is a time noted for concern about physical appearance, heterosexual appeal, and conformity to group standards.

Behavior profiles of children with short stature secondary to growth hormone deficiency (GHD), constitutional delay (CD), and Turner's syndrome (TS) were studied to further assess what role sex, age, and etiology might have in adjustment patterns. Both parent and teacher behavior ratings were employed to provide cross situational measures of behavior.

Method

Subjects. Fifty-six children whose height was a minimum of two standard deviations below expectations for age secondary to either GHD, CD, or TS were studied. Children were seen as outpatients at a university pediatric endocrinology clinic on referral from private pediatricians. Evaluation of the etiology of the short stature included a detailed family history to document family growth patterns, gestational and perinatal history to assess intrauterine growth and development, and a complete physical exam with emphasis on the assessment of a series of anthropometric indices of long bone and axial skeletal growth. Appropriate laboratory evaluations to exclude renal or thyroid dysfunction were routinely completed. Bone maturation was assessed by the method of Greulich and Pyle[6]. A diagnosis of constitutional delay of growth and adolescence was made on the basis of documented growth velocity within two standard deviations of normal velocity for age, significant retardation of bone age which was compatible with other physical parameters of body maturation, and projected adult height estimated by the method of Bayley and Pinneau[6] (pp 231-250) within normal limits. Although a family history compatible with constitutional

delay was frequently obtained, its presence was not a criteria for diagnosis. Subjects with historical or physical findings compatible with hypopituitarism or with significantly reduced growth velocity had assessment of the integrity of growth hormone and ACTH secretion with an arginine-insulin tolerance test[7]. Growth hormone deficiency was diagnosed if maximum growth hormone concentration failed to exceed 7 ng/ml on any of the nine sequential samples obtained. Of the 13 children identified as growth hormone deficient, 2 had multiple pituitary trophic hormone deficiencies. A diagnosis of Turner's syndrome was made on the basis of the presence of the physical stigmata of this entity. Clinical diagnosis was confirmed by laboratory assessment of X chromatin deletion (buccal smear or peripheral white cell karyotype) or documentation of elevated serum gonadotropins.

All children had to have at least average intelligence, as measured from prorated scores of the Similarities and Vocabulary subtests of the Wechsler Intelligence Scale for Children - Revised (WISC-R), for inclusion in the study. Since previous studies have shown short children to generally possess average intelligence[8] with a normal distribution of scores, this screening measure was deemed sufficient to obtain a relatively homogeneous population for the purposes of the study.

Parents of three children refused participation in the study because of lack of interest or time constraints. The majority of participating children were from lower and upper middle class backgrounds[9], as Table 1 reports. Table 1 further indicates the ordinal position of children within

---

Insert Table 1

---

their families. Children were divided into either an adolescent ($\overline{X}$ = 14.8

years, SD = 1.1, range = 13 - 16 years) or younger ($\bar{X}$ = 9.6 years, SD = 2.3, range = 6 - 12 years) age group. Age 13 was used as a cut-off for inclusion in the older age group since adolescence is noted for attitudes which stress group conformity and physical appearance.

Assessment Instruments: Teacher ratings of children's behavior were obtained on the Problem Behavior Checklist[10] which assesses children's functioning in the areas of Personality Disorder, Conduct Disorder, Immaturity-Inadequacy, and Socialized Delinquency behaviors. Parents also completed the Problem Behavior Checklist and Achenbach[11] Social Competence Scale. This latter scale provides a total social competency score based upon information about a child's activities (e.g., hobbies, chores), social functioning (e.g., clubs and organizational memberships, number of friends) and school functioning (e.g., grades, special education, grade retention, school problems, etc.). Both of these measures have been shown to differentiate behaviors among clinical populations of children.

Results

Groups of children did not differ significantly on measures of intelligence when grouped according to age, sex, or etiology of short stature. Parent data was completed on all fifty-six of the studied children; teacher data was returned on forty-six of the children. No systematic pattern could be discerned in examining the parent data of the ten children on whom teacher data was not returned, suggesting no systematic sample bias occurred.

A 2 X 2 X 3 (Age X Sex X Etiology) unequal N analysis of variance was conducted on the dependent measures obtained from parent and teacher behavior checklist scales of Personality Disorder, Conduct Disorder, Immaturity-

Inadequacy, and Socialized Delinquency. Additional parent ratings were available on the Achenbach Social Competency scales of School, Social and Activity Adjustment.

Parent data showed a significant interaction of Etiology X Age on the School Adjustment Scale of the Achenbach, $F(2,46) = 8.93$, $p < .005$. All groups of children, except young children with CD, were rated as having significant adjustment problems as Table 2 reports. Further, an Age X

Insert Table 2

Sex interaction was significant on this measure, $F(2,46) = 6.15$, $p < .02$. Table 3 shows that adolescent females were rated as having more school problems than other groups although both younger and older groups of

Insert Table 3

males and females, or in other words, all children studied, were showing some evidence of difficulty in school adjustment.

Analysis of teacher ratings for frequency of Personality Disordered behavior problems yielded a significant Age X Sex interaction, $F(1,36) = 9.59$, $p < .004$. Adolescent females were rated as showing more inhibited behaviors than other groups as Table 4 illustrates. Analysis of the

Insert Table 4

frequency of Immature and Inadequate behaviors also revealed a significant effect of Age X Sex $F(1,36) = 6.75$, $p < .01$. All children were rated as

exhibiting a relatively high incidence of immature and inadequate behaviors except adolescent males as Table 4 also shows.

Discussion

Adolescent females appeared to be the most behaviorally troubled group of short children, according to teacher and parent ratings. Teacher ratings showed older females to be experiencing more inhibited or personality disordered behaviors than other groups. Adolescent girls were also rated by teachers as being more immature in behavior than adolescent males. Similarly, parents felt that older short girls were experiencing more school adjustment difficulties than other groups of short children, although most groups were thought to be having some adjustment difficulty. It is not clear to us why adolescent girls with short stature may experience more adjustment difficulty than other groups of short children. However, similar findings were obtained when groups of adults (age 16 to 73 years) were studied, with short stature secondary to various genetic skeletal dysplasias[12]. Men complained less often of psychiatric symptoms and felt less stigmatized than women subjects. Perhaps referral patterns or degree of emphasis placed upon physical appearance and conformity to social expectation are factors related to this sex difference. No sex-related behavior differences were found in groups of younger (age 6 to 12) children in this study. It appears that as females become older, they may experience greater difficulty adjusting to their short stature than men. Additional study of sex differences in the behavior patterns of short children may provide clearer reasons for these results.

A correlation was found between diagnoses and parent ratings of their children's behavior. Parents, who were aware of the etiology of

their children's short stature, reported etiology specific behavior patterns. Parents viewed the school adjustment of young CD children as age appropriate while all other groups of children with CD, GHD, and TS were noted to have school problems. Perhaps parents of young CD children, aware that their children will eventually "catch up" in growth, may have fewer concerns about their children's functioning and expect adjustment to be more normal.

In contrast, teachers who were presumably less aware of the cause of children's short stature, rated behavior as differing only on more apparent and visible factors of age and sex. These findings provide support for the idea that etiology specific behavior patterns are potentially an artifact of parental awareness of etiology and may not be reliable cross situational behavioral findings. Perhaps the parental attributions found in our behavior ratings may explain the discrepant results of early studies with short children[1,2], which reported a correlation between diagnoses and patterns of behavior on the basis of parent interview, in contrast to later studies which used more objectively administered and scored self-report assessments, and have not shown etiology specific behavior patterns.

All groups of short children except the young CD patients were rated as having significant problems in school functioning, according to their parents, in comparison with normative data. School adjustment ratings were based upon grades, necessity of special classroom programming, grade retention, and parent's spontaneous comments of any other problems they deemed to be school related. In further evaluation of this unexpected finding, it appears that some significant school problems may be directly or indirectly related to children's short stature. Eval-

uation of detailed parent data revealed that approximately one-fifth, or 21% of the sample, felt that their child's physical restrictions in gym class and/or peer teasing about their child's small size were problems of sufficient magnitude to merit inclusion as school adjustment problems.

The second major cause of school adjustment difficulty was grade retention. Of the subjects studied, 32% had repeated a grade in school. Children who repeated a grade because of missed school subsequent to an injury/illness associated with the cause of their short stature made up 7% of the sample. However, the most sizable number of children, constituting 25% of the sample, were retained for reasons that were specified by descriptors such as "immaturity" and "small size." This latter group of children were either held back in kindergarten through second grade or were enrolled in pre- or transitional first grade. This relatively high incidence of retention is particularly surprising in light of previous research which has suggested that short children generally possess average intelligence and have the potential for grade appropriate academic achievement[13] with the exception of TS girls who experience some mathematical difficulties[14]. Pollitt and Money[13] suggest that some short children, despite generally average intelligence, may exhibit depressed academic achievement. Children with GHD evidenced "average to below average" school achievement even though their intelligence test scores were "average to above average" (p. 418). This ability/achievement discrepancy was considered secondary to emotional factors. Unfortunately, achievement data was not available in the present study to test this hypothesis. However, parents did not indicate poor academic performance as a factor related to retention.

Parent comments in the present study indicated that "immaturity" and "small size" were often key factors in the decision to retain a child. Perhaps small children generally receive fewer opportunities to develop maturity because they are perceived and treated as younger than their age, thereby fostering immaturity. Many studies have suggested that short children as a group, regardless of etiology of short stature, tend to be inhibited and immature[3,4]. Therefore, it may be paradoxical to retain a child who is "immature" since peer role models and social interactions will be with younger aged classmates in the repeated grade. Potentially, and inadvertently, further immaturity may be fostered. Rather, it may prove more beneficial to avoid retention with the expectation of facilitating greater maturity through continued contact with age appropriate peer models. Alternatively, children's small stature may be one additional factor weighting the decision toward retention when difficulty adjusting in school is present. However, children with GHD and TS are likely to always be shorter than peers of their chronological age such that a philosophy of providing "catch-up" growth time in the early years may have little merit. One might argue that young CD children could profit from retention for this reason, but our findings suggest that this is the one group that parents do not feel are having significant school problems.

Further documentation of the high rate of grade retention shown with short children in this study is desirable to evaluate the pervasiveness of this finding. Next, study of the academic achievement of small children will be a relevant and necessary endeavor to define the relationship between possible achievement difficulties, secondary emotional factors

related to short stature, and incidence of grade retention. Further studies may encounter difficulty in their effort to detect whether behavioral parameters such as immaturity and inhibition, physical limitations due to small size, or possible academic under-achievement are primarily related to grade retention in short children. It is very likely that some or all of these factors overlap and may contribute to a retention decision.

Table 1

Demographic Data on Short

Children Studied

Socioeconomic Status

Classification	Percentage
I Upper	3%
II Upper Middle	43%
III Lower Middle	33%
IV Upper Lower	17%
V Lower Lower	3%

Ordinal Position in the Family

Ordinal Position	Percentage
First*	47%
Second	30%
Third	7%
Fourth	7%
Fifth	7%
Sixth	3%

*2 children had no siblings

Table 2

Parent Ratings of Short Children's Behavior

on the School Adjustment Scale

(Mean T Scores[a] Reported)

		Etiology of Short Stature		
		CD[b]	GHD[b]	TS[b]
	Adolescent	37.5	40.1	43.6
		(N=13)	(N=8)	(N=5)
		(SD=13.5)	(SD=8.1)	(SD=18.1)
Age				
	Younger	49.6*	40.2	39.0
		(N=12)	(N=10)	(N=8)
		(SD=19.3)	(SD=7.9)	(SD=13.9)

[a]Mean T score = 50, SD = 10.

[b]CD = Constitutional Delay

GHD = Growth Hormone Deficiency

TS = Turner's Syndrome

*Young CD children showed significantly better school adjustment scores than did other groups of short children, $p < .05$.

Table 3

Parent Ratings of Short Children's Behavior

on the School Adjustment Scale

(Mean T Scores[a] Reported)

		Sex	
		Female	Male
	Adolescent	36.0*	42.0
		(N=11)	(N=15)
		(SD=16.5)	(SD=9.0)
Age			
	Younger	45.4	42.3
		(N=11)	(N=19)
		(SD=19.8)	(SD=12.4)

[a]Mean T score = 50, SD = 10.

*$p < .05$.

Table 4

Teacher Ratings of Short Children's Adjustment

on the Behavior Problem Checklist

(Mean Number of Items Endorsed)

		Personality/Inhibition Behavior Problems		Immature Behavior Problems	
		Female	Male	Female	Male
Age	Adolescent	13.6*	4.0	4.9	1.5*
		(N=8)	(N=14)	(N=8)	(N=14)
		(SD=8.3)	(SD=3.7)	(SD=5.6)	(SD=1.8)
	Younger	7.0	6.5	4.6	3.7
		(N=9)	(N=15)	(N=9)	(N=15)
		(SD=5.3)	(SD=5.2)	(SD=3.3)	(SD=2.3)

*$p < .05$.